DOCUMENT RESUME

ED 284 961 CE 046 925

AUTHOR Anderson, Lowell D.
TITLE The Status of Vocational Trade and Technical Teacher Education Departments in Selected States.
PUB DATE Dec 86
NOTE 27p.; Paper presented at the American Vocational Convention (Atlanta, GA, December 1986).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Educational Trends; *Faculty Mobility; Postsecondary Education; *Schools of Education; *Teacher Education; *Teacher Educators; Technical Education; Trade and Industrial Education; *Trade and Industrial Teachers; Trend Analysis; Vocational Education
IDENTIFIERS Alabama; California; Florida; Illinois; Minnesota; New York; Ohio; Oklahoma; Pennsylvania; Texas

ABSTRACT

A review of the status of vocational trade and industry (T&I) teacher education departments from 1969 through 1986 was designed to determine trends that have affected teacher education. Information reported in the Industrial Teacher Education Directory was reviewed in five intervals of 3 years each. Considerable change was evident in the 10 states selected as representative of trends: Alabama, California, Florida, Illinois, Minnesota, New York, Ohio, Oklahoma, Pennsylvania, and Texas. The number of Bachelor of Science degrees awarded peaked during school year 1978-79. The number of terminal degrees awarded did not reveal a trend but reflected an erratic pattern. Total number of faculty in rank peaked in 1975-76 and has slightly decreased through 1985-86. Total number of part-time faculty has decreased considerably. The number of research assistants and lecturers has continued to decrease over the 16-year period. The actual number of departments involved in vocational T&I teacher education has decreased. Apparently, the status of vocational T&I teacher education based on entries in the directory was in a general state of decline in the 10 states. (YLB)

Introduction

The success of the vocational trade and technical teacher education departments at many universities has increasingly become a question of survival. Feirer (1982) said, "Today many vocational teacher education departments are either fighting for their lives or have already been disbanded--and the end is not in sight. Things will get worse in the next few years before they get better." The question frequently asked is, "What is the future role of the vocational trade and technical teacher education department?"

The issue of who controls vocational teacher education has historically centered around three agencies: the local school, the state board and the normal schools. The Commission on National Aid to Vocational Education in 1914 (Hawkins, Prosser & Wright, 1951, p. 245) reported, ". . . the responsibility for teacher training for vocational schools had been placed under the control of state boards for vocational education."

The Committee on Industrial Education of the American Federation of Labor in 1912 expressed that, "Successful teachers must be men of practical experience,

with more than a textbook acquaintance with the industrial world . . . and in addition should have an understanding of the general principles of teaching" (Hawkins, Prosser & Wright, 1951). The result being that even today industrial experience is seen as essential while teaching knowledge as only desirable.

The Smith-Hughes Act, 1917, section 12, recognized teacher education by mandating that 20 per cent of the state allocation be spent on the three areas of agriculture, trade and technical and home economics teacher education (Hawkins, Prosser & Wright, 1951). The responsibility for overseeing teacher education was placed with the respective state board.

The University Council for Vocational Education (Schafer & Moss, 1977) published, The Role of Universities in Vocational Education stated that, "Today, university-based vocational teacher education programs are typically viewed as pre-service arms of each state's operating system . . ." In this role they are viewed as having limited functions of pre- and in-service teacher education or responding to demands of state boards. The resources of the university, because of this perception, are not focused on the broader problems of the field.

Universities could provide disciplined inquiry, leadership personnel development, and a broader range of service. The universities have responded to this perception of the responsibility being primarily service by not making departments an integral part of the total university.

The interrelationship between service and certification requirements seems apparent. Resnick and Gardner (1979) found trade and technical teachers were required the fewest number of semester credits for certification of all vocational teachers and the most occupational experience. Erekson and Barr (1985) cautioned teacher educators on "alternative credentialing" of teachers in other disciplines. These cautions, if alternative credentialing were adopted, include: the demand for increased inservice programs, measures to assure public of teacher competence, an increased turnover of provisionally certified teachers, and the need to examine qualifications of teachers working at different grade levels. They advocate that teacher educators take an active role in the credentialing regulation development process.

Seemingly, during a period of both public and political scrutiny regarding the quality of teachers, quality would be of primary concern to state boards who have been given the

responsibility of vocational trade and technical teacher education.

The issue of validating standards through certification testing, according to Dubravcic, Chinien and Pratzner (1986) could cause problems in the current supply of teachers. They state, "If selective admissions criteria are applied in trade and industrial teacher education programs, many potential candidates will be screened out of the programs." At the same time, the agency responsible for licensing of teachers may be held accountable for assuring the public of competence in basic skills, teaching knowledge/skills, and occupational competence.

The introduction of teacher certification testing may be one of the single most important events in teacher education (Gorth & Chernoff, 1986). Goertz and Pitcher (1985) found that 24 states in 1984 required standardized testing with an additional 8 states implementing testing by 1988. The National Occupational Competency Testing Institute, incorporated in 1973, reported (1982) that 8 states require the Teacher Occupational Competency Test (TOCT) for certification. Six additional states appear to have added the TOCT as a requirement for certification since the 1982 survey. Apparently, certification testing will

become an increasingly important procedure in the future of vocational trade and technical teacher education.

The purpose of this review on the status of vocational trade and technical teacher (T&I) education departments from 1969 through 1986 was to determine trends which have affected teacher education. Ten states were selected for review. The Industrial Teacher Education Directory published by the American Council on Industrial Arts Teacher Education and the National Association of Industrial and Technical Teacher Educators served as the source of information. Presumably, if the departments are in serious trouble, then the future of teacher education will also experience problems.

Procedure

The Industrial Teacher Education Directory published by the American Council on Industrial Arts Teacher Education and the National Association of Industrial and Technical Teacher Educators, 1969-1986 (Wall, G., Compilier, 1969-1972, Dennis, E., Ed.. 1972-1986) was used as the data source. Three year intervals were selected: 1969-1970, 1972-1973, 1975-1976, 1978-1979, 1982-1983, and 1985-1986. In the process of review, ten states were selected as representative of trends (see Table 1).

Insert Table 1 about here

Institutions within the state were selected if they (1) had a department or section of a department designated as vocational trade and technical or industrial, (2) faculty identified as having responsibility in vocational trade and technical, or (3) if degrees were awarded in vocational trade and technical teacher education.

Data is reported in Figures 1 through 6. These include the number of: (1) Bachelor of Science degrees awarded, (2) Master of Science degrees awarded, and (3) Doctorate degrees, other terminal degrees and advanced certificates awarded, (4) faculty by rank, (5) part-time faculty, research assistants and lecturers, and, (6) number of T&I departments in the ten states.

Status Report on Teacher Education

Vocational Trade and Technical Degrees.

The number of Bachelor of Science or Bachelor of Vocational Education degrees was at a low of 187 in 1969-1970, peaking in 1978-1979 at 421 and then declining to 245 in 1982-1983 (see Figure 1). The number of Master of Science degrees awarded in 1969-70 was 137, increasing to

Table 1

States Included in the Vocational Trade and Technical Teacher Education Trend Study

Alabama
California
Florida
Illinois
Minnesota
New York
Ohio
Oklahoma
Pennsylvania
Texas

342 in 1978-79. A new low was experienced in 1982-83 with 139 degrees being awarded (see Figure 2).

Insert Figures 1 and 2 about here

The number of terminal degrees or certificates awarded parallels the same trend as the Master of Science degree trend (see Figure 3). The highest number of degrees reported as awarded was in 1972-73 with 52. A low of 20 degrees was reported in 1978-1979 with 30 being awarded in 1985-86.

Insert Figure 3 about here

Vocational Trade and Technical Faculty.

Determining the responsibility of a faculty member within a department presented some difficulty in classifying faculty for this study. However, if the department was involved only in vocational trade and technical teacher education it was assumed that the faculty members of the department, even if not designated as vocational trade and technical, still had primary responsibilty in vocational T&I. In some departments faculty have multiple

Figure # 1

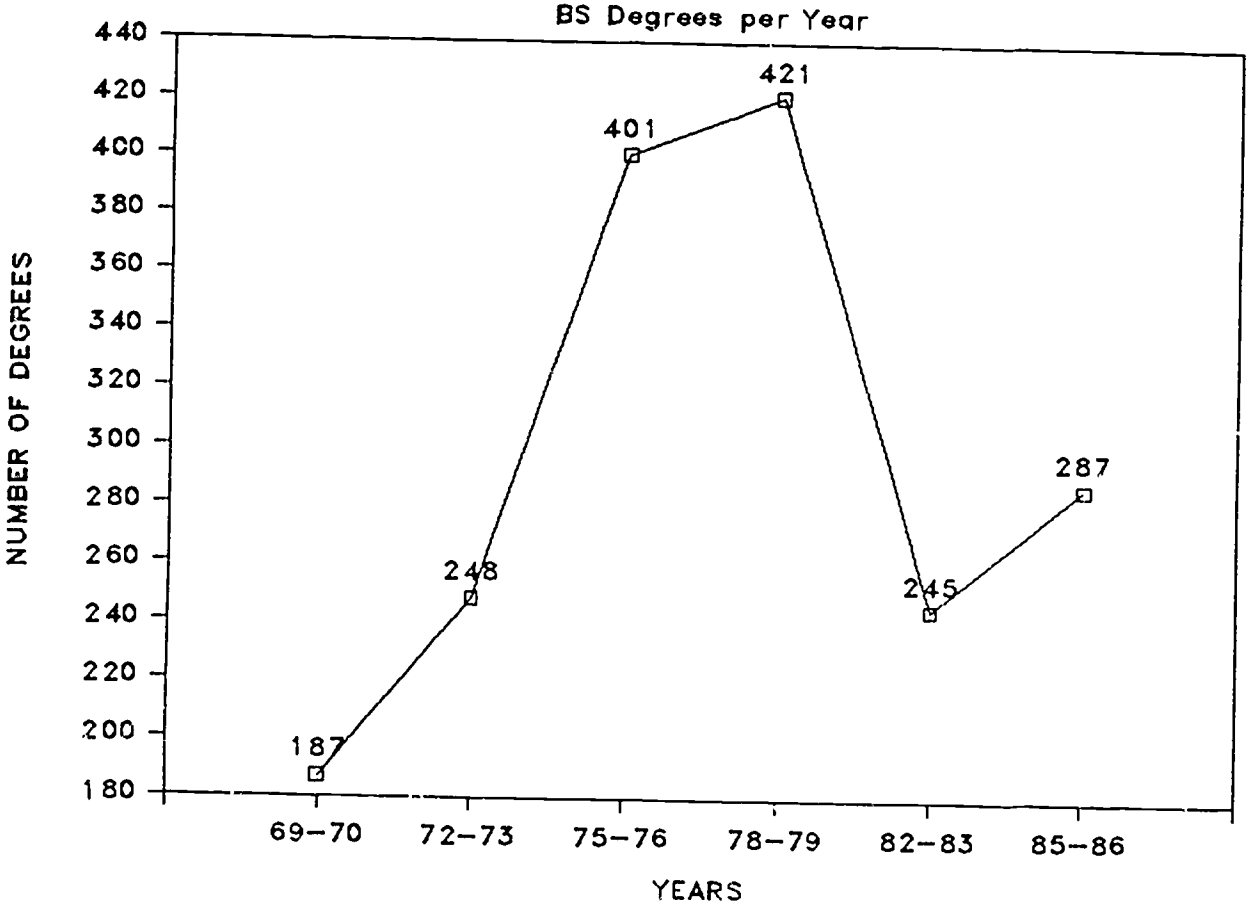

BS Degrees per Year
NUMBER OF DEGREES
440
420
400
380
360
340
320
300
280
260
240
220
200
180
187
248
401
421
245
287
69–70
72–73
75–76
78–79
82–83
85–86
YEARS

Figure # 2

MS Degrees per Year

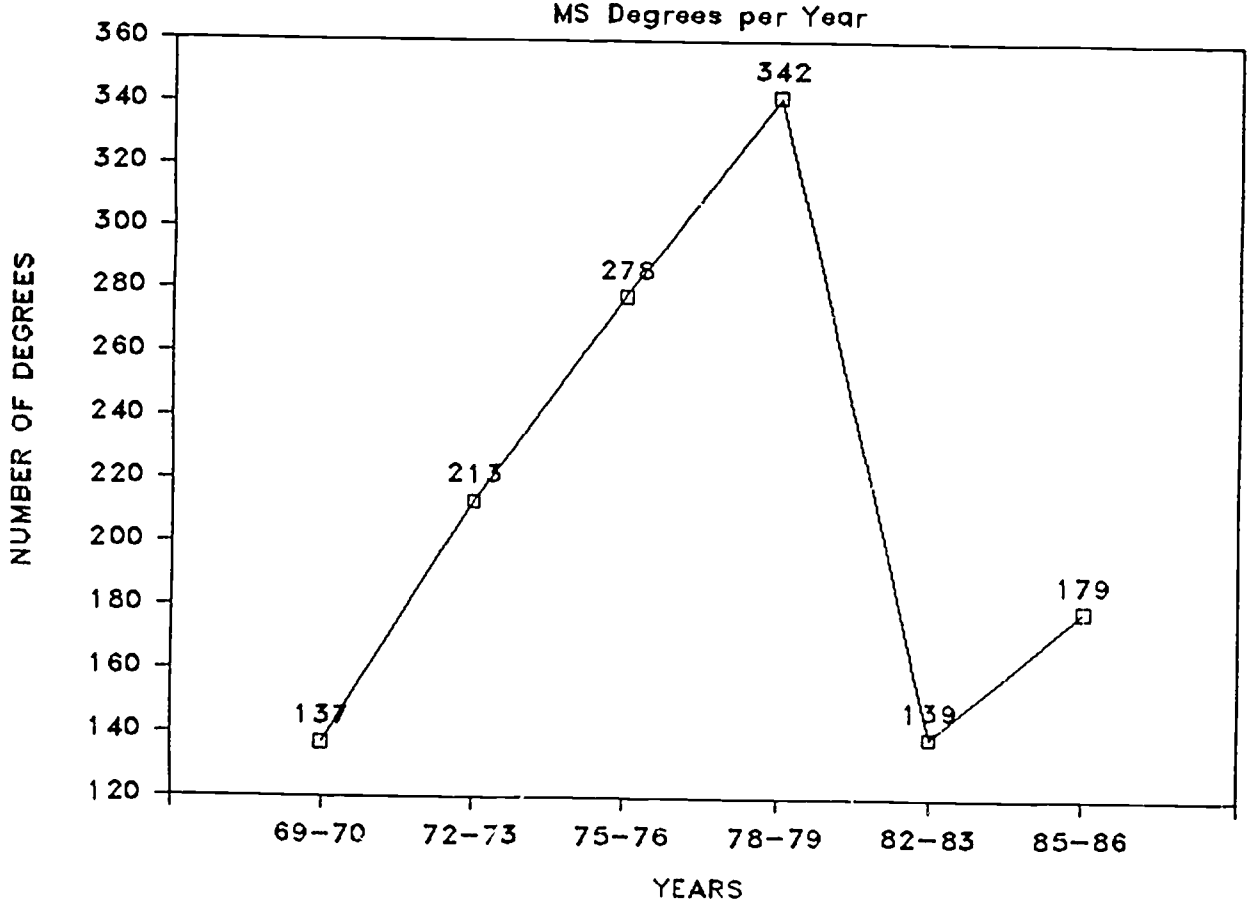
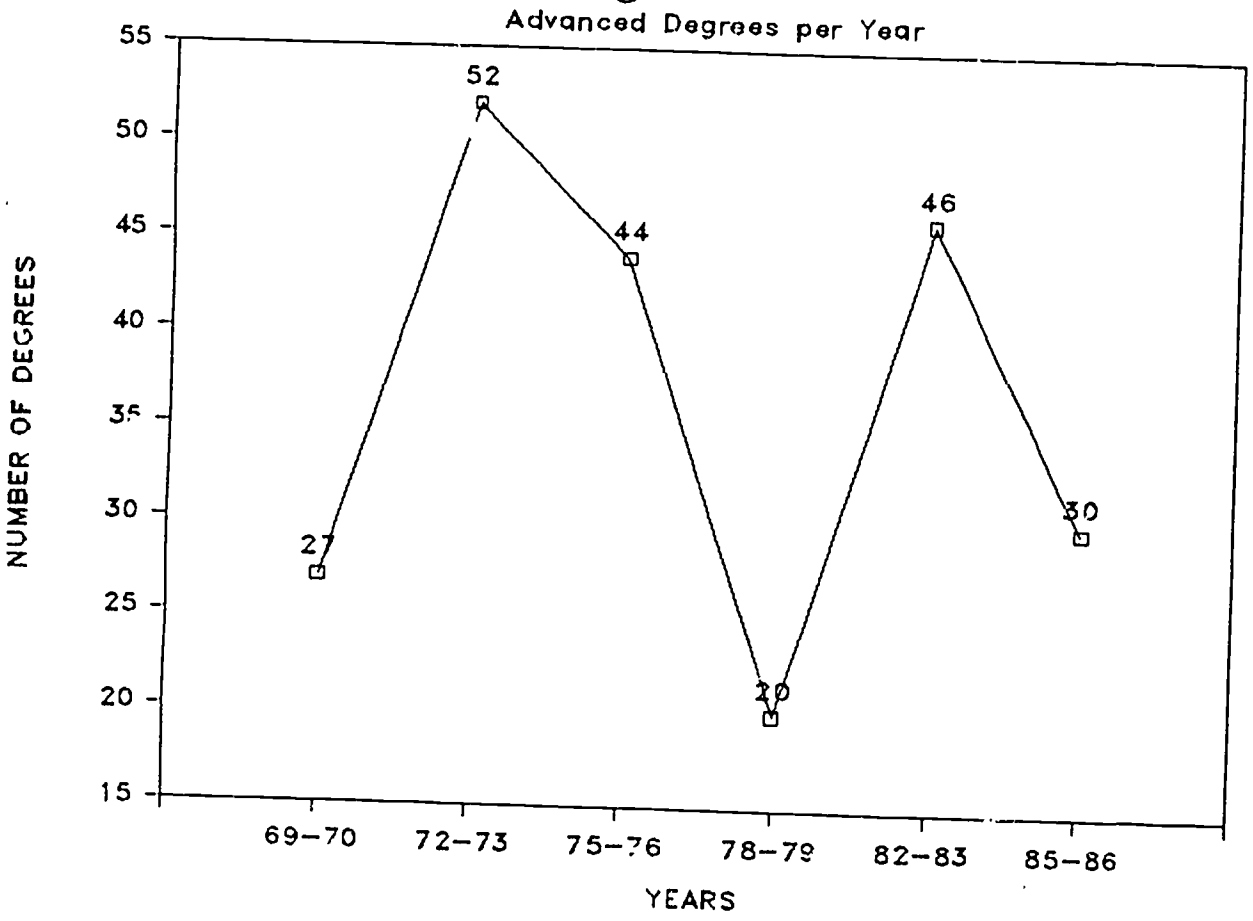


Figure # 3


Advanced Degrees per Year
NUMBER OF DEGREES
55
50
45
40
35
30
25
20
15
52
44
27
20
46
30
69–70
72–73
75–76
78–79
82–83
85–86
YEARS

responsibilites. In these instances, for purposes of this study, they were classified as vocational T&I.

In some states rather rapid changes in organization cause problems in determining the actual number of faculty and the amount of time commitment to T&I teacher education. In one state five additional departments started to award degrees in T&I in 1978-79. This increased the number of faculty by 13--five full professors, four associate professors and four assistant professors.

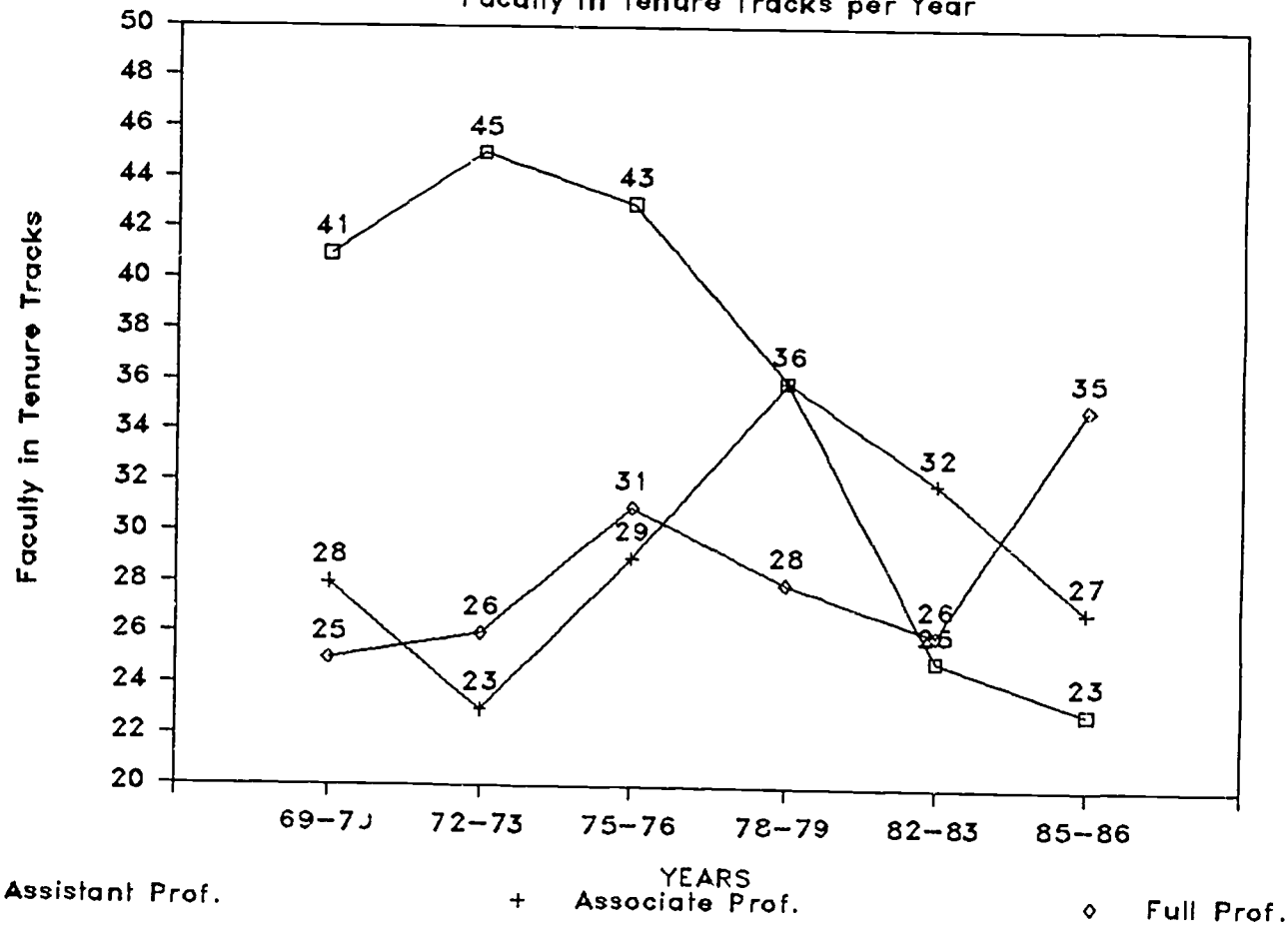
Insert Figure 4 here

The number of assistant professors has been decreasing from a high of 45 in 1972-73 to a low of 23 in 1985-86. The number of associate professors, as one would anticipate, has increased with a high in 1978-79 of 36, and a similar high of 35 in 1985-86. The number of full professors has decreased from a high of 31 in 1975-76 to a low of 23 in 1985-86 (see Figure 4).

The total number of faculty (see Figure 4b) has decreased from a high of 103 in 1975-76 to a low of 83 in 1982-83. If the number of faculty is adjusted for the state which added 13 faculty in 1978-79, the slope reflects a

Figure # 4

Faculty in Tenure Tracks per Year



decrease in the number of faculty changes but still shows a decrease in the total number of faculty starting in 1975-76 (see Figure 4b).

Insert Figure 4b here

In general, the condition of faculty could be characterised as both decreasing in total number and increasing in age.

The number of part-time faculty and researchers/ lecturers on part-time assignment is also decreasing. The part-time faculty member has been an important person in the in-service program of vocational trade and technical teacher education. Programs of in-service have usually been off-campus designed to meet the needs of teachers in designated centers. Part-time faculty have also been critical to the maintenance of on-campus faculty dependent upon student credit hour production to show adequate work load.

Insert Figure 5

The total number of faculty identified as part-time was reported as a high of 99 in 1974-75 with a current low of 5

Figure # 4b

Total Faculty in Tenure Track per Year

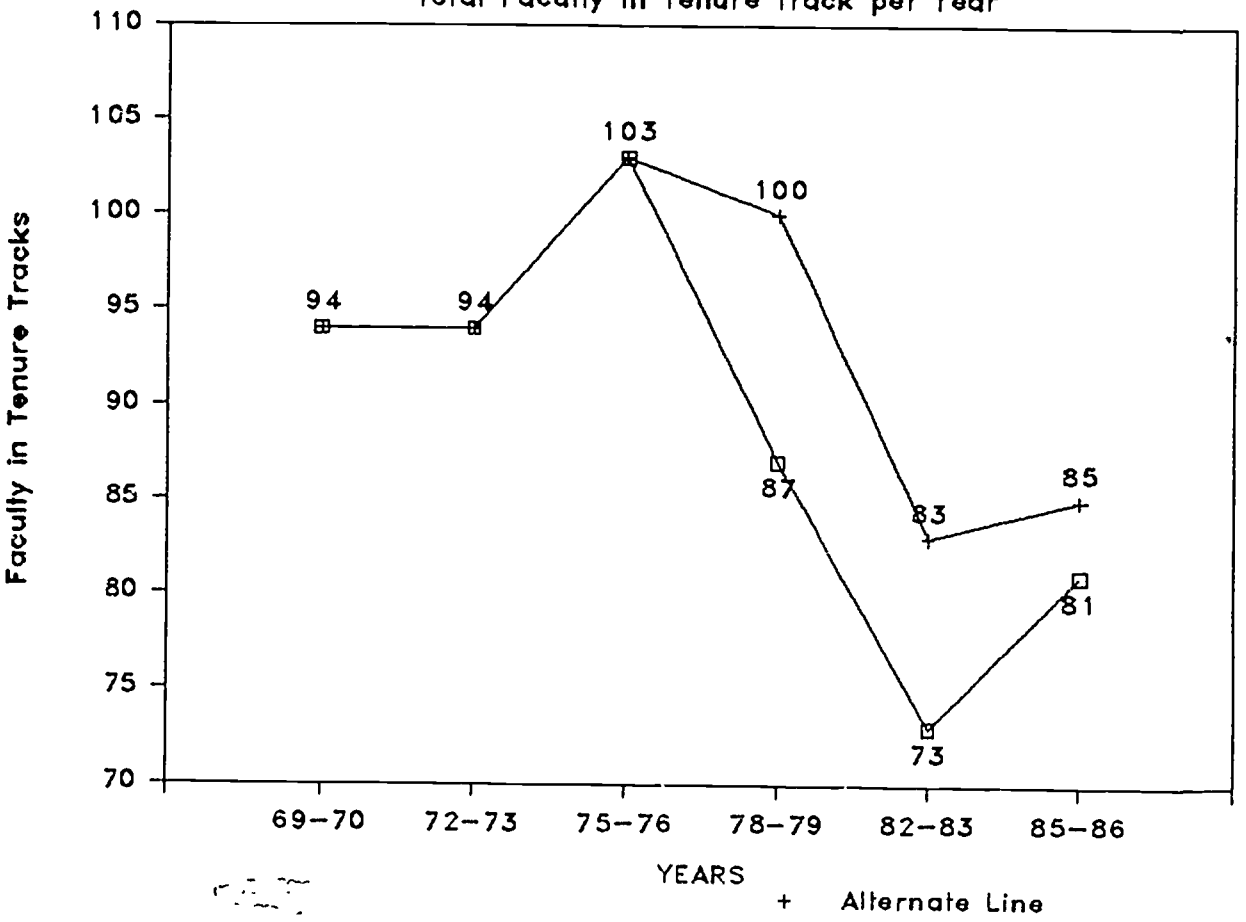
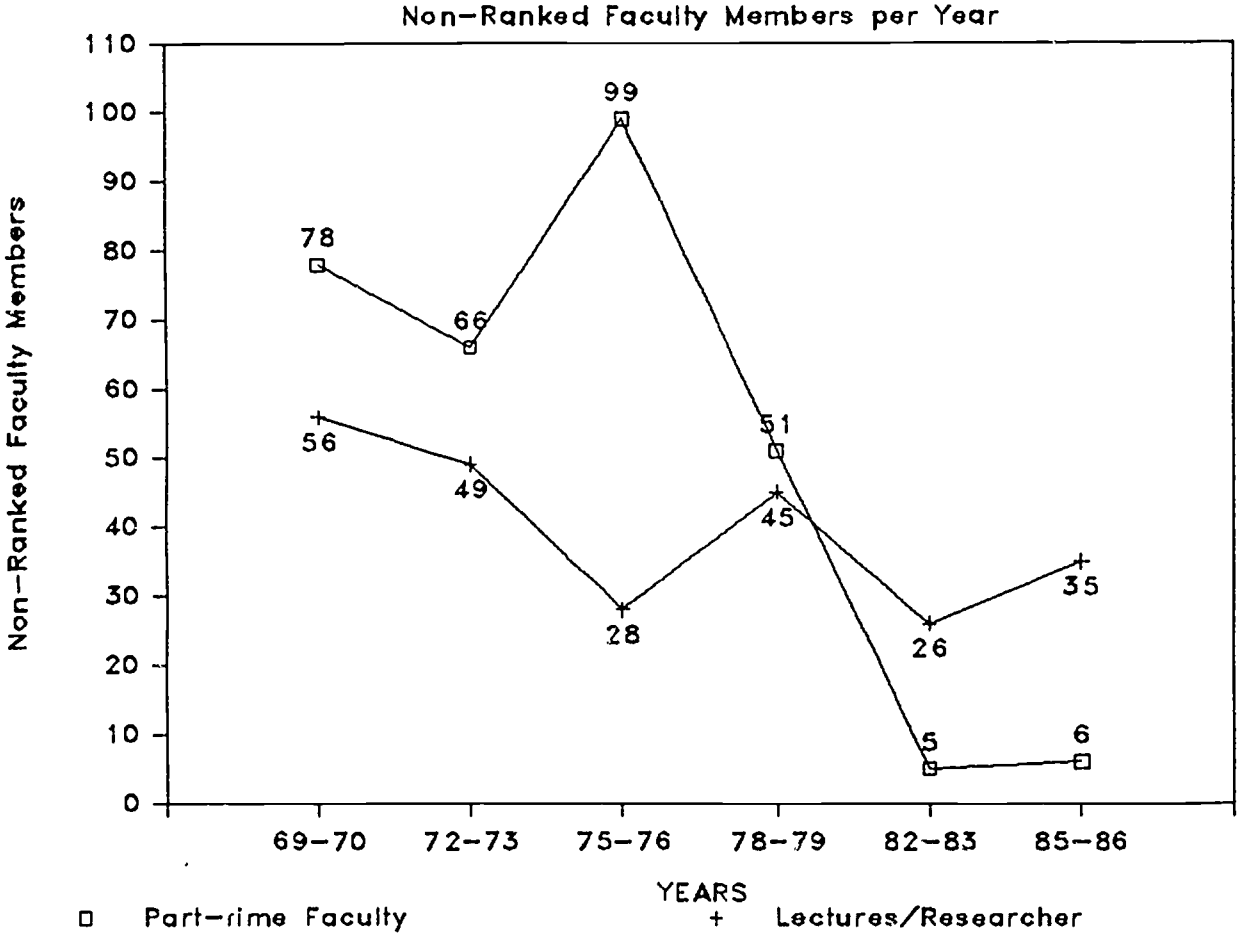


Figure # 5


Non-Ranked Faculty Members per Year
Non-Ranked Faculty Members
110
100
90
80
70
60
50
40
30
20
10
0
78
66
99
51
5
6
56
49
28
45
26
35
69-70
72-73
75-76
78-79
82-83
85-86
YEARS
Part-time Faculty
Lectures/Researcher

faculty starting in 1982-83. The practice of reporting part-time faculty may not be common to all states. Two of the ten states regularly list part-time faculty while eight of the ten states do not appear to make this a common practice.

The number of researcher assistants and lecturers has generally declined from 1969 through 1986 (see Figure 5). Persons in these classifications are usually serving in assistantship or fellowship positions funded through grants, contracts or directly from the university. These positions are not usually viewed as permanent.

Vocational Trade and Technical Departments.

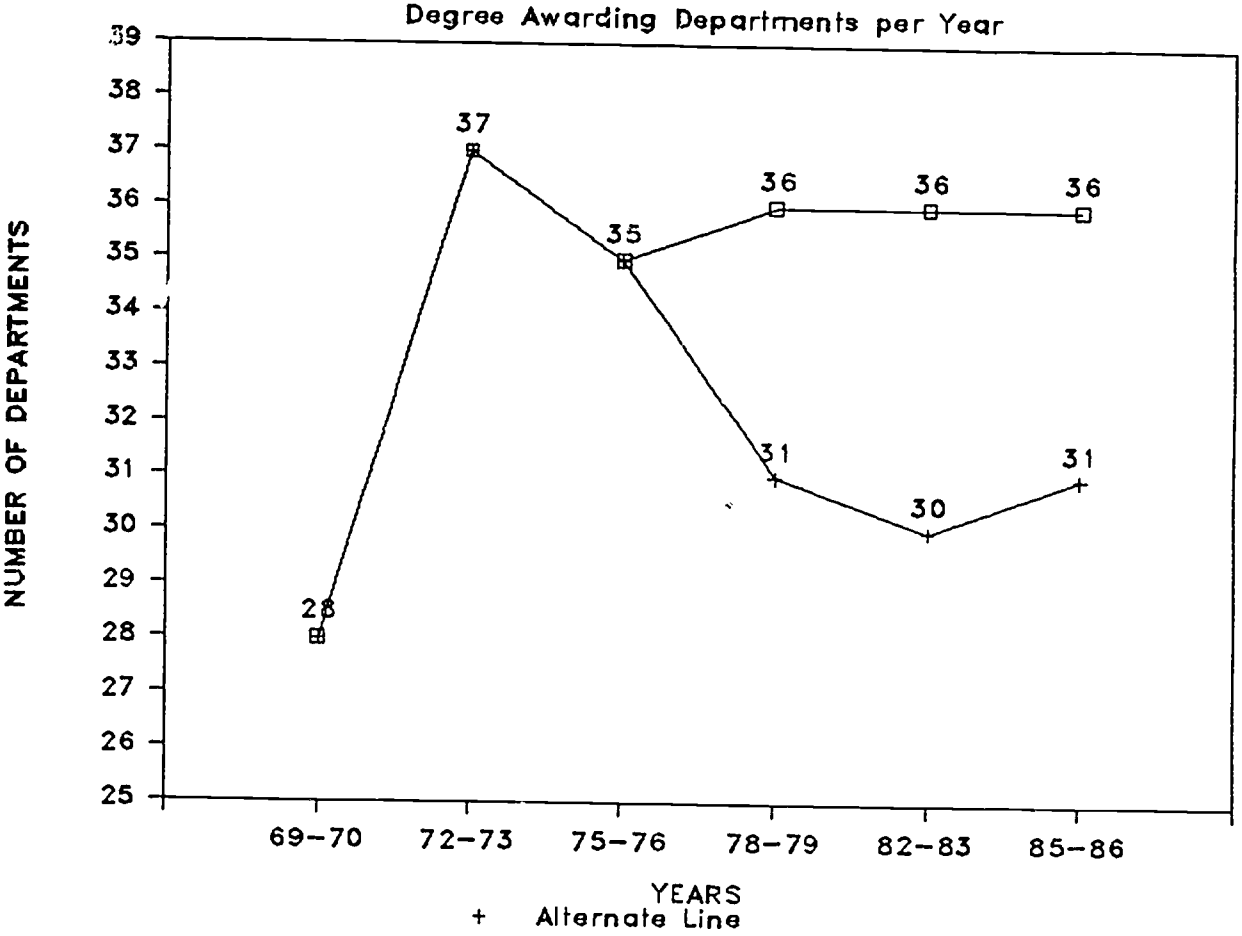
The number of departments which award degrees has remained relatively stable since 1972-73 (see Figure 6). The alternate line on Figure 6 relects the addition of five existing departments to the total number of departments. This change within a state should not be construed to be rapid or significant growth. More than likely, based on total number of degrees awarded, it would appear to be an internal change in delivery caused by various pressures from within the state.

Insert Figure 6

Changes in the name given a department was one of the difficulties in identifying changes within universities. The listing of departments as vocational T & I in 1969 was common. By 1975-76 new definitions and names for departments became commonplace. This was especially evident in New York, California, Texas and Minnesota. Some states remained stable in name and organization of departments; such as, in Pennsylvania, Oklahoma, and Florida.

Changes appear to fit into three categories. These are name changes, structure or organizational changes, and administrative changes. Examples of common name changes are from vocational trade and industrial to vocational education department, to vocational personnel program, to educational leadership in vocational education, to department of instructional programs, and to occupational education. When examining a listing of faculty, these name changes usually reflect a combining of other vocational departments or adding multiple faculty responsibilities, usually in industrial technology programs.

Figure # 6


Degree Awarding Departments per Year
NUMBER OF DEPARTMENTS
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
37
36
36
36
35
31
31
30
28
69-70
72-73
75-76
78-79
82-83
85-86
YEARS
+ Alternate Line

Structure or organizational change usually means moving from a department to a section, or in some cases to a division. These changes usually reflect changes in the administrative and operational autonomy of the new organization. The larger and more dramatic changes were evident in New York State with an apparent attempt to centralize all vocational education at one university. The attempted change would appear to have failed over a period of 6 to 9 years with the original organization again starting to reappear.

Administrative change is evident when a department is moved under a larger department or under a different school. Usually this means the previous department loses some degree of access to administrative decision making. In some situations more access is possible. For example, at one university, the inservice program was moved from industrial education to engineering extension. The decrease in extension service faculty in T&I over a period of time would probably indicate that engineering did not see inservice vocational T&I as a primary mission.

In reviewing departments, the largest number of single purpose departments was in 1972-73 with 37 changing to 31 multiple purpose departments in 1985-86. The overall

strength of these remaining departments would seem to have eroded based on faculty assignments and title of department.

Summary and Conclusions

The current status of vocational trade and technical teacher education departments based on an analysis of the information reported in the Industrial Teacher Education Directory from 1969 through 1986, reviewed every third year, revealed some interesting developments. In the ten states selected for the study, considerable change is evident.

The following conclusions seem warranted:

1. The number of Bachelor of Science degrees awarded peaked during the 1978-79 year. The lowest reported was in 1969-70; and, second lowest in 1982-83. The number of terminal degrees awarded does not reveal a trend but reflects a rather erratic pattern.

2. The total number of faculty in rank peaked in 1975-76 and has been on a slight decrease through 1985-86. It is also of interest that the composition of faculty has changed from assistant professors as being the more numerous to an increase in full and associate professors. This would normally occur if new faculty are not appointed.

3. The total number of part-time faculty has decreased considerably and reached a low in 1982-83. It would seem

that this indicates considerable decrease in in-service efforts required by universities.

4. The number of research assistants and lecturers has continued to show a decrease over the 16 year period.

5. The actual number of departments involved in vocational T&I teacher education has decreased when the effect of the five departments introduced in Minnesota is not included. The changes are found as name changes, organizational or structure changes, and administrative changes. The number of changes from the conventional title/department organization to changes fitting in these three categories would appear to indicate conventional departments are experiencing considerable pressure to adapt to new situations.

Apparently, the status of vocational trade and technical teacher education based on entries made in the Industrial Teacher Education Directory is in a general state of decline in the ten states reviewed in this survey. One of the problems evident in the Directory is that persons responsible for reporting data probably skew it to make the best possible case. In most instances careful examination will reveal the dropping of a section of a department or

discontinuation of reporting as the signal of termination of a program.

Lowell D. Anderson is professor and chairman of the Industrial Technology Education Department at Indiana State University, Terre Haute.

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